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**OFFICE OF THE STATE AUDITOR'S
REPORT ON THE EXAMINATION OF
INFORMATION TECHNOLOGY-RELATED CONTROLS
AT MASSACHUSETTS BOARD OF BAR EXAMINERS**

April 29, 2006 through February 12, 2010

**OFFICIAL AUDIT
REPORT
MAY 10, 2010**

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INTRODUCTION

The Massachusetts Board of Bar Examiners (MBBE) is authorized under Chapter 221, Section 35, of the Massachusetts General Laws to establish and uphold rules pertaining to the administration of the bar examination process. The Board determines the time and place of the examinations, and conducts and grades the exams. The Board consists of five members, with at least four members being residents of different counties who serve for terms of five years with the term for one member expiring on October 1st of each year. The Board's members are appointed by and subject to the approval of the Supreme Judicial Court (SJC), the Commonwealth's highest Appellate Court. The Board operates with four full-time and one part-time employee. MBBE's budget for fiscal years 2009 and 2010 was \$1,108,593 and \$1,075,000, respectively.

At the time of our audit, the MBBE staff utilized seven desktop workstations to support their mission and business functions. The workstations are connected via networking equipment and fiber optic cable to the SJC's network located in the John Adams Courthouse. The Board of Bar Examiners' information technology operations are provided and supported by the SJC's Information Technology Department. The SJC has custodial responsibility for two mission-critical application systems that are used by the MBBE. The first application system is the Forecourt Case Management System, which operates on a Bull midrange server running an IBM AIX operating system. The MBBE uses the Forecourt Case Management System to process applications for the administration of the bar examination and admission to the Massachusetts Bar. The second application system is a File-Net Panagon Imaging system, which runs on a Windows NT 4.0 Compaq ProLiant 3000 server with a RAID 5-disk system. This application allows the MBBE to review scanned application materials on line from their desktop workstations.

The SJC network also provides the MBBE with access to MAGNet, the Commonwealth's wide area network, and the mission-critical applications of the Human Resources/Compensation Management System (HR/CMS) and the Massachusetts Management Accounting and Reporting System (MMARS) for payroll and budgeting purposes respectively.

The Office of the State Auditor's examination was limited to determining whether corrective action had been taken to address prior audit results regarding business continuity planning and off-site storage.

AUDIT SCOPE, OBJECTIVES, AND METHODOLOGY

Audit Scope

In accordance with Chapter 11, Section 12, of the Massachusetts General Laws, we performed a follow-up audit of certain information technology (IT) general controls. Our follow-up audit, which was conducted from January 25, 2010 through February 12, 2010, covered the period of April 29, 2006 through February 12, 2010. The scope of the audit consisted of an evaluation of the status of prior audit results brought forward in our audit report, No. 2006-1103-7T, issued September 7, 2006, regarding business continuity planning and off-site storage of backup copies of magnetic media.

Audit Objectives

Our objective was to determine whether corrective action had been taken to address audit results in our prior audit report regarding business continuity planning and off-site storage of backup media. We sought to determine whether business continuity or user area plans were in place and in concert with the Supreme Judicial Court's (SJC) disaster recovery plans to regain business operations that are supported by technology.

Audit Methodology

To determine the scope and objectives of our follow-up audit, we conducted pre-audit work that included reviewing prior audit results and recommendations and gaining an updated understanding of MBBE's mission and business functions. Once the pre-audit work was completed, we determined the scope and objectives of the follow-up audit.

To determine whether corrective action had been taken concerning business continuity planning and off-site storage of backup media, we held interviews with MBBE staff responsible for the Board's business continuity planning and with staff members of the SJC who were responsible for the SJC's disaster recovery efforts. The SJC interviews included the Chief Information Officer and the Coordinator of Program and Policy Development. We sought to obtain an understanding of the SJC's disaster recovery plan since the SJC provides information technology support to the MBBE. We also sought to obtain an understanding of the MBBE's business continuity plan that depends on the SJC's disaster recovery and business continuity efforts. We conducted a walk-through of the SJC's file server room to review the on-site storage of backup copies of magnetic media and reviewed procedures and documentation for off-site storage of backup tapes.

Since the SJC has governance over the MBBE, our interviews also focused on the scope of the SJC's existing business continuity plan should IT resources at the Board be lost or damaged. We also inquired whether adequate procedures were in place and in effect for on-site and off-site storage of backup media to regain business operations if the IT systems operated by the SJC became inoperable or inaccessible. We conducted a business impact analysis to determine whether the SJC had performed a high-level evaluation of the impact of business disruption should IT operations be rendered inoperable or inaccessible. We evaluated the content of the SJC's disaster recovery plan and the MBBE's business continuity plan.

Our audit was conducted in accordance with generally accepted government auditing standards issued by the Comptroller General of the United States through the U.S. Government Accountability Office and generally accepted industry practices. Audit criteria used in the audit included management policies and procedures and control guidelines outlined in Control Objectives for Information and Related Technology (CobiT version 4.1), as issued by the Information Systems Audit and Control Association, July 2007.

AUDIT CONCLUSION

The Massachusetts Board of Bar Examiners' (MBBE) business continuity plan, in tandem with the Supreme Judicial Court's (SJC) disaster recovery plan, provides reasonable assurance that the MBBE's business functions can be regained within an acceptable period of time should IT systems supported by the SJC be rendered inoperable. We found that the MBBE's business continuity plan, which had been formally reviewed and approved, and the SJC's disaster recovery plan outlined reasonable strategies for recovering IT operations. Our audit confirmed that the MBBE had reviewed their business continuity plan in December 2009 and that the plan was updated in January of 2010.

We determined that mission-critical applications had been identified and a risk analysis of the Board's business functions had been performed and documented. In addition, the Board's business continuity plan included contingency plans for MBBE staff to work from home using their laptop computers in the event of a disaster. Both the MBBE's business continuity plan and the SJC's disaster recovery plan have documented procedures for staff to continue working at an alternate site. The MBBE's business continuity plan provides instructions for various disaster scenarios and includes a secondary and third location for alternate processing sites depending on the severity of the disaster. We verified that the MBBE's business continuity plan includes a ranking of essential functions ranging from priority one to priority five. A category that is assigned a priority one ranking means that the functions for that category have to be performed within 24 hours after the business continuity plan is activated. Priority five means that the functions for that category need to be performed within one month after the business continuity plan is activated.

The responsibility for business continuity planning within the MBBE has been assigned at a manager level. In addition, an IT staff member from the SJC has been assigned the responsibility of overseeing the continuation of IT operations at the alternate site for both the SJC and the MBBE. The MBBE business continuity plan includes a contact list of employees and their telephone numbers. We also found that in addition to having an electronic copy and hardcopy of the business continuity plan stored on site, a hard copy is maintained off-site and was readily available.

The SJC maintains on-site storage and administers off-site storage, through a vendor, of backup copies of magnetic media for MBBE's mission-critical applications. We found that the SJC provided secure on-site storage of backup media for the MBBE.

AUDIT RESULTS

Prior Audit Results Resolved - Business Continuity Planning and Off-Site Storage

Our prior audit found that the Massachusetts Board of Bar Examiners (MBBE), in conjunction with the Supreme Judicial Court (SJC), had not formalized comprehensive procedures for business continuity planning for restoring processing functions in the event that automated systems were rendered inoperable or inaccessible.

Our current audit determined that the MBBE had developed a formal, comprehensive, business continuity plan that is supported by the SJC's disaster recovery plan. Our review of the SJC's disaster recovery plan indicated that the plan included well-articulated strategies for disaster recovery. The MBBE business continuity plan addresses risks to the Board, mission-critical applications, contact lists and alternate operational processing sites. The MBBE's business continuity plan is updated annually with a recent update as of January 2010.

Recommendation

We recommend that the MBBE continue to work with the SJC on their business planning efforts and that the MBBE test their business continuity plans and conduct awareness training for their employees regarding the business continuity plan. We noted that some of the attachments in the MBBE's business continuity plan needed to be reprinted to be more legible. We also recommend that an electronic copy of the MBBE's business continuity plan be stored off site with the current hardcopy version.

Auditee's Response

The Board of Bar Examiners will continue to work with the Supreme Judicial Court on our business planning efforts in the event that our IT operations are rendered inoperable or unreachable due to a disaster. The Board agrees it is also very important to continue to train and update the staff on a regular basis with regard to the business continuity of operations plan (COOP).

We are in the process of securing more legible documents with important information from one of our test sites in order to update our COOP manual. An electronic copy of the COOP manual is now stored off site along with the hard copy version.

Auditor's Reply

We are pleased the Massachusetts Board of Bar Examiners will continue to work with the Supreme Judicial Court on business planning efforts, and plans to train and update staff on a regular bases. It is a proactive step by the Board to replace attachments to the COOP with more legible documentation and to maintain electronic and hardcopy versions of the COOP off site as a practical safeguard. We encourage the Board of Bar Examiners to test their COOP.